**Section 3 Assessment**

For questions 1-8, load the **dslabs** dataset heights:

library(dslabs)  
data(heights)  
options(digits = 3)    # report 3 significant digits for all answers

You have used 9 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 2**

1/1 point (graded)

How many individuals in the dataset are above average height and are female? correct

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You have used 6 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 3**

1/1 point (graded)

If you use mean on a logical (TRUE/FALSE) vector, it returns the proportion of observations that are TRUE.

What proportion of individuals in the dataset are female?

(Report 3 significant digits)

correct

0.227 Loading

You have used 3 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 4**

This question takes you through three steps to determine the sex of the individual with the minimum height.

You have used 2 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 4b**

1/1 point (graded)

Use the match() function to determine the index of the individual with the minimum height. correct

1032 Loading

You have used 2 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 4c**

1/1 point (graded)

Subset the sex column of the dataset by the index in 4b to determine the individual’s sex.

correct

You have used 1 of 1 attempt Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 5**

This question takes you through three steps to determine how many of the integer height values between the minimum and maximum heights are not actual heights of individuals in the heights dataset.

You have used 1 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 5b**

1/1 point (graded)

Which integer values are between the maximum and minimum heights? For example, if the minimum height is 10.2 and the maximum height is 20.8, your answer should be x <- 11:20 to capture the integers in between those values. (If either the maximum or minimum height are integers, include those values too.)

Write code to create a vector x that includes the *integers* between the minimum and maximum heights.

There are multiple ways to solve this problem, but the grader expects you to use the format in the problem description.

correct

You have used 1 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 5c**

1/1 point (graded)

How many of the integers in x are NOT heights in the dataset?

(Use the sum() and %in% functions in addition to the ! operator.)

correct

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You have used 1 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 6**

Using the heights dataset, create a new column of heights in centimeters named ht\_cm. Recall that 1 inch =  
2.54 centimeters. Save the resulting dataset as heights2.

You have used 1 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 6b**

1/1 point (graded)

What is the mean height in centimeters? correct

173.5405 Loading

You have used 1 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

Create a data frame females by filtering the heights2 data to contain only female individuals.

You have used 1 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 7b**

1/1 point (graded)

What is the mean height of the females in centimeters? correct

165 Loading

You have used 1 of 10 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 8**

1/1 point (graded)

The olive dataset in **dslabs** contains composition in percentage of eight fatty acids found in the lipid fraction of 572 Italian olive oils:

library(dslabs)

data(olive)

head(olive)

Plot the percent palmitic acid versus palmitoleic acid in a scatterplot. What relationship do you see?

There is no relationship between palmitic and palmitoleic.

There is a positive linear relationship between palmitic and palmitoleic.

There is a negative linear relationship between palmitic and palmitoleic.

There is a positive exponential relationship between palmitic and palmitoleic.

There is a negative exponential relationship between palmitic and palmitoleic.

correct

You have used 1 of 2 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 9**

1/1 point (graded)

Create a histogram of the percentage of eicosenoic acid in olive.

Which of the following is true?

The most common value of eicosenoic acid is below 0.05%.

The most common value of eicosenoic acid is greater than 0.5%.

The most common value of eicosenoic acid is around 0.3%.

There are equal numbers of olive oils with eicosenoic acid below 0.05% and greater than 0.5%.

correct

You have used 1 of 2 attempts Some problems have options such as save, reset, hints, or show answer. These options follow the Submit button.

**Question 10**

2/2 points (graded)

Make a boxplot of palmitic acid percentage in olive with separate distributions for each region.

Which region has the highest median palmitic acid percentage?

correct

Which region has the most variable palmitic acid percentage?

correct

You have used 1 of 2 attempts